






Work Order ID 61685



Tuesday, August 31, 2010 11:48:47 AM



Page 1


Item ID: D6103-003 Accept  Setup Start 
Revision ID:
Item Name: Round Billet, Aluminum Stop 
Start Date: 8/31/2010 Start Qty: 20.00  Cust Item ID:
Required Date: 9/7/2010 Req'd Qty: 20.00  Customer:

Reference:


Approvals: Process Plan: H Date: 10-8-31 Tooling: _____ Date: _____ Run Start 
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------


Draw Nbr	Revision Nbr
D6103	Rev B

100  PURCHASING 0.00
Purchasing Memo 0.00
Purchasing Issue P/O: 11160 ☐ a) Description: Alluminum round billet ☐ b)
Ø3.500" x 12.500" long ☐ c) Tolerance on all dimensions are +0.030"/-0.000"
☐
d) Material: 7075-T7351 (QQ-A-225/9) ☐ Material certification required

C2 10/9/01 (30)

110  Receive & Inspect for Damage & Mat'l Certs 0.00
Packaging Memo 0.00
Packaging Ensure material certification is attached

P 10/9/10 (22)

120  QC6- Inspect dimensions to drawing 0.00
QC Memo 0.00
Quality Control

mf 10/09/10

22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			



NOTE: Date & initial all entries



Work Order ID 61685

Tuesday, August 31, 2010 11:48:47 AM

Page 2

Item ID: D6103-003 Accept  Setup Start 
Revision ID: Stop 
Item Name: Round Billet, Aluminum
Start Date: 8/31/2010 Start Qty: 20.00  Cust Item ID:
Required Date: 9/7/2010 Req'd Qty: 20.00  Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start 
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 	Identify as per dwg & Stock Location: <u>MAT</u>	0.00							
Packaging Packaging	Memo	0.00				22			
140 	QC21- Final Inspection - Work Order Release	0.00							
QC Quality Control	Memo	0.00							

Handwritten notes:
10/09/16
22
22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, August 31, 2010 11:48:51 AM

Page 1

Work Order ID: 61685



Parent Item: D6103-003



Parent Item Name: Round Billet, Aluminum


Start Date: 8/31/2010

Required Date: 9/7/2010

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP Rev:A New Issue 06-02-09 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6103-003P  round alum billet		Purchased	No			110	Each	0.0000	1	20			



Car W/P/05 (22)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

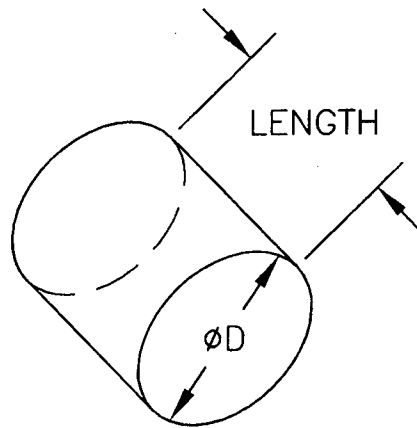
NOTE: Date & initial all entries



DESIGN <i>P41</i>	DRAWN BY <i>P41</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D6103	Rev. B SHEET 1 OF 1
DATE 06.01.31		TITLE ROUND BILLET, ALUMINUM	SCALE NTS
A	01.04.10	NEW ISSUE	
B	06.01.31	ADD D6103-003	

SPECIFICATION CONTROL DRAWING

RELEASED
06.02.07 *[Signature]*



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *61685*

RP10-8-31

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY,
DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	D (Diameter)	Length
D6103-001	7075-T6/T651 (QQ-A-200/11 OR QQ-A-225/9)	Ø3.250	12.50
D6103-003	7075-T7351 (QQ-A-225/9)	Ø3.500	12.50

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PO REPRINT

Purchase Order ID PO11160

Purchase Order Date 1/18/10

PO Print Date 9/01/10

Page Number 1 of 1

Order From :

VC-MET001

METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100
TORONTO, ON M4Y 3A5
CA

Contact Name

Vendor Phone 514 694 9575

Vendor Fax 514 695 3281

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr 10127-2607

Terms

Net 30

Currency

CAD

FOB

Ship To :

DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req. Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D6103-003P	round alum billet	1/21/10 Yes	33.00 Each	Yours ppd	\$65.0000	\$2,145.00
1	D6103-003P	round alum billet	9/17/10 Yes	20.00 Each	Yours ppd	\$65.0000	\$1,300.00

Release 20

Special Inst:

DESCR; ALLUMINUM ROUND
BILLET 3.500" X 12.500" LONG
TOLERANCE ON ALL DIMENSIONS
ARE +0.030"/-0.000"
MAT; 7075-T7351 (QQ-A-225/9)
AS PER DWG; D6103 REV B
B#55430 61685

Rec 22 Per 9/15

PO Total:

\$3,445.00

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY

10/09/16

Change Nbr: 5

Change Date: 9/01/10

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP

Page 1 of 1

Shipment No:487950

Ship From: Castle Metals MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 14-SEP-10	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 487950-2	

Shipment Details	Final Destination Branch - MON
-------------------------	---------------------------------------

Order No 971022	Line No 1	Item No 21246.MO	Description 3.5000.RD.7075.T651.ALUMINUM.CF.144.0000 CUT TO 12.5 IN (+ .1250/- .0000 IN) - BAND SAW CUTTING SPECIFICATIONS: AMS 4123,AMS QQ-A-225/9,ASTM B211				
Purchase Order No 11160		Part Number YOUR ITEM NUMBER: D6103		Ordered Qty 22 PCS		Invoice Qty 22 PCS	
Details							
Delivery No. 43115332	Mill	Heat Number 20133721	Mech Id	PCS 22	Width (IN)	Length (IN)	Shipped Qty (LBS) 266.76

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

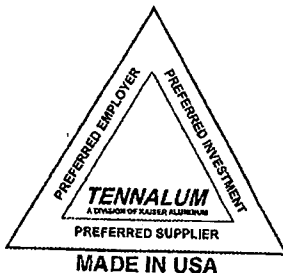
Reviewed by Authorized Castle Metals Representative:

Date:

ant 10/09/10

KAISER ALUMINUM FABRICATED PRODUCTS

Tennalum
PO Box 669
Jackson, TN 38302
731-423-2811



CERTIFIED TEST REPORT
<http://Certs.KaiserAluminum.com>

Miscellaneous Notes

Made in USA

This material was melted and manufactured in the USA. Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. This material meets the requirements of (cold finished) T6 temper, AMS 4122K and QQ-A-225/9E (CANCELLED). NAFTA - YES. Material complies with FAR BAA (FAR 52.225-1, Buy American Act-Supplies), DFARS BAA (DFARS 252.225-7001 Buy American Act & Bal of Payments Prog), and FAR TAA (FAR 52.225-5 Trade Agreements) AS9100B:2004 Material is RoHS compliant.

Castle Metals FP
HEAT NUMBER 20133721
MECHANICAL ID
ITEM CODE 21246
LOT NUMBER
PO NUMBER 56899
RECEIPT DATE 7-15-2010
SUPPLIER KALISER
SPECIFICATION
LCS ND
COMMENT
APPROVED PL

out 10/04/16

CERTIFICATION

Kaiser Aluminum & Chemical Corporation ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

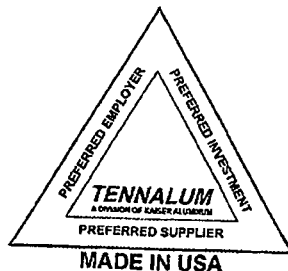
John Rennekamp

Plant Serial: 139466

Kaiser Order Number: 660576

KAISER ALUMINUM FABRICATED PRODUCTS

Tennalum
PO Box 669
Jackson, TN 38302
731-423-2811



CERTIFIED TEST REPORT
<http://Certs.KaiserAluminum.com>

CUSTOMER PO NUMBER: 56899-1		CUSTOMER PART NUMBER: 21246		PRODUCT DESCRIPTION: Cold Finished Round	
KAISER ORDER NUMBER: 660576	LINE ITEM: 1	SHIP DATE: 07/12/2010	ALLOY: 7075	TEMPER: T651	
WEIGHT SHIPPED: 1964 lbs.	QUANTITY: 14 pcs.	B/L NUMBER: 31059	DIAM/DAF/THKNS: 3.500 in.	WIDTH: 0.000 in.	LENGTH: 144.0 in.
SHIP TO: A M Castle & Co AM Castle & Co. 3400 No. Wolf Road Franklin Park, IL 60131 USA			SOLD TO: A M Castle & Co AM Castle & Co. 3400 No. Wolf Road Franklin Park, IL 60131 USA		

Test Code: 1000 AC

Actual Physical Properties

Lot Number	LONG. UTS ksi	LONG. YTS ksi	LONG. ELONG. %
20133721	80.0	72.5	15.5

Chemical Composition, WT. % (Aluminum Remainder)

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	OTHERS EACH	OTHERS TOTAL	Lot
Actual	0.10	0.24	1.4	0.03	2.7	0.19	5.8	0.02			20133721
Max	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	
Min			1.2		2.1	0.18	5.1				

Specifications

Standard: ISO 9001, ASTM B211-03, AMS 4123H, AMS-QQ-A-225/9 Non-Standard: A97075-02-14

cmf 10/09/16

CERTIFICATION

Kaiser Aluminum & Chemical Corporation ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

John Rennekamp

Plant Serial: 139466

Kaiser Order Number: 660576